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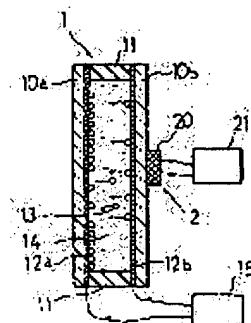
**PATENT ABSTRACTS OF JAPAN**(11)Publication number : **03-053224**(43)Date of publication of application : **07.03.1991**

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G02F 1/1343(21)Application number : **01-189124**(71)Applicant : **TOYOTA MOTOR CORP**(22)Date of filing : **21.07.1989**(72)Inventor : **TOSHIMA KAZUO  
NAKAMURA NAOKI****(54) ELECTROPHORETIC DISPLAY ELEMENT****(57)Abstract:**

**PURPOSE:** To prevent the flocculation of electrophoretic particles by oscillating at least either of a dispersion medium and the electrophoretic particles by driving an oscillating device when a voltage is impressed to an electrode.

**CONSTITUTION:** A cell 1 is oscillated by the oscillation of a PZT ultrasonic oscillator 20, by which dispersion media 14 and the electrophoretic particles 13 are oscillated as well when an oscillator driving circuit 21 is driven simultaneously with the inversion driving of an electrophoretic display element driving circuit 15. The electrophoretic particles 13 stuck to the electrode 12b are liberated from the electrode 12b by the energy of this oscillation and are attracted to the electrode 12a. The PZT ultrasonic oscillator 20 is driven for a prescribed period of time and while the liberated electrophoretic particles are diffused into the cell space, the particles are attracted to the electrode 12a. Consequently, the electrophoretic particles 13 attracted to the electrode 12a are stuck uniformly to the entire surface of the electrode 12a and the red display of the electrophoretic particles 13 is visible from a viewing side.

**LEGAL STATUS**

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